



NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION MISSION SUPPORT CONTRACT ERT, INC.



151 Patton Avenue, Asheville, NC 28001-5001

Administrative Standard Operating Procedure 200-01-018

IT Off-Site Backup Procedures

1. **References.** Contract #DG133W-10-CQ-0042, Task Order 0022, “Mission Support Services”
2. **Attachments.** None.
3. **Supersedes.** - This SOP supersedes previous version dated July 8, 2013.
4. **General** - This SOP lists the responsibilities and outlines the procedures to be followed in storing data, documentation, and software in the off-site backup library.
5. **Purpose** - This procedure ensures that current copies of the source code, executable code, and complete systems documentation are available to expedite recovery of NCEI’s major applications in the event of a disaster.
6. **Scope.** All software, data, and corresponding documentation which are of value to the Federal government will be copied and the backup copy stored at an authorized off-site facility. The Information Technology Branch (ITB) handles off-site backup for all copyrighted software and related material. The off-site digital data library provides the facility to satisfy this off-site backup requirement. Backup media, software, and documentation for NCEI are stored at the off-site library.
7. **Procedure.**
 - 7.1. HPSS
 - 7.1.1. The console may receive an email stating which tapes have been ejected from a robot. These tapes will be found in OU812/R2D2’s 3592 or T-Finity I/O slot. This email is stored in the “HPSS Backup” folder at the console. These tapes are to be taken to the off-site library during the next scheduled trip.
 - 7.1.2. To check for any tape request that need to be brought back during the daily backup trip, click on the Monitor tab in the HPSS window, then click on the Tape Request and Check-In option. Tape requests can also be found by clicking on Alarms and Events and scrolling to the bottom of the screen. Tape request appear every ten minutes as Warnings under the Severity column. Tape requests, usually for data recovery purposes, are also manually submitted by certain users through e-mail or through Landesk Service Desk tickets. Be sure to notify the individual who requested the tapes when they are loaded into the robot. Update the “Tape Handling” spreadsheet in STG-Console’s GoogleDocs to reflect the moves.

- 7.1.3. Backup tapes that are ejected must be secured inside one of four locked, hard plastic media cases that are located at the console prior to being taken offsite.
- 7.2.TSM – A series of TSM emails will be sent to console everyday (including weekends and holidays) starting at approximately 10:30. Each of these emails will be stored in the “TSM Backup” folder or “TSM Backup Floppy” folder at the console.
 - 7.2.1. The first email, "TSM: Reclaimed Tapes," is a list of LTO tapes that need to be brought back from the off-site library and loaded into OU812. There may be days when no reclaimed tapes are requested and an email stating this is sent by the system. If any tape cannot be found at the off-site, check via web interface (<https://ou812.ncdc.noaa.gov>) to see if the tape is in the robot, if the tape cannot be found at the off-site or on OU812 interface, email the tape number to Robert Briscoe and Ryan Nelson. To re-integrate the reclaims into the library at approximately 13:40, an intake program starts that moves these tapes from the I/O slot to the internal tape library. Any time the door is opened and closed the robot will scan the I/O, but it will not intake the tapes until the intake program runs. If the I/O slot is full (ten tapes) the robotic arm will make five passes, once every seven minutes. If more than fifty tapes are being reclaimed, please contact Robert and have him restart the process.
 - 7.2.2. The second email, "TSM: Offsite Tapes," is a list of all the tapes that the robot is ejecting to be stored off-site. Please check the ejected tapes against this list and record any discrepancies on the LTO Backup Log. Place a "Contains Sensitive Data" label on each of these tapes if it does not already have one. The tape(s) listed on this email under the heading "Please label these tapes with today's date and DbBackup" should be banded with the USB thumb drive created in the next section with a printed copy of the "Offsite Tapes" email. Four padlocked media storage cases kept in the console area are used to securely transport these tapes to the off-site library. The DbBackup tape, USB thumb drive and email bundle will be placed in the three-day rotational rack in the off-site library and any DbBackup tape older than three days should be returned and loaded into the robot. The other backup tapes taken off-site will be filed in numeric sequence in the tape racks where they will remain until requested.
 - 7.2.3. The third email, "TSM: Copy this email to floppy and take offsite," is saved on a USB thumb drive before being banded with the DbBackup tape and a printed copy of the "Offsite Tapes" email.
 - 7.2.4. Backup tapes that are ejected on a day that a trip to the off-site library is not scheduled (weekends, holidays or inclement weather) must be secured inside one of two media safes that are located at the console. (Two additional media safes are kept either at the console are in the blank tape cabinet.) These safes are checked every Monday, the day after a holiday or when weather conditions allow for the next backup trip and the contents are taken to the off-site library.
- 7.3. Media Storage Cases
 - 7.3.1. The four media storage cases kept near the console are to be used when transporting tapes to and from the offsite library. The media cases have to remain

locked during the trip to and from the library. The combination for the locks is kept in the password safe

- 7.3.2. If there are more than forty backup tapes, use the locking media safes to transport the tapes to the off-site library. There are two smaller locking media safes on the bottom shelf of the tape cabinet located in the computer room storage area. The keys to all media safes are in the key cabinet at the console.

7.4. Locating Tapes via Web Interface for OU812/R2D2

7.4.1. 3592

- 1. Go to to <https://OU812.ncdc.noaa.gov> under Cartridges/Data Cartridges
- 2. Set Logical Library drop down menu to 3592
- 3. Enter tape number in volume serial box. Example “007395”. If the number is truncated such as “00739*”, it will locate from 007390 to 007399.

7.4.2. LTO

- 1. Go to <https://ou812.ncdc.noaa.gov> under Cartridges/Data Cartridges
- 2. Set Logical Library drop down menu to LTO
- 3. Enter tape number in volume serial box. Example “007395”. If the number is truncated such as “00739*”, it will locate from 007390 to 007399.

7.5. Locating Tapes via Operator Panel for T-Finity

7.5.1. Log into the T-Finity

7.5.2. Tap the <Inventory> option on the left side menu.

7.5.3. Select the “All” option in the *Source* field.

7.5.4. Enter the 6 character tape label in the box next to the <Find by Barcode> icon, which is located at the bottom of the screen, and tap the <Find by Barcode> icon.

7.5.5. The location will appear under the Source column on the right hand side. If the tape is not in the library, you will see “Reached end of inventory list while searching for TAPE” in the top blue box. Where “TAPE” is the tape label you entered.

7.5.6. Tap the <Security> option on the left side menu.

7.5.7. Tap the <Switch User> option on the left side menu to logout.

- 7.6. Blank Tapes (3592/LTO) – Blank tapes are stored in the cabinets in the back of the computer room behind OU812/R2D2. Labels, if needed, can be found in the supervisor’s office in the cabinet. An email should be sent to the supervisor, Ryan Nelson, Robert Briscoe, and Ken Schmidt any time new labels are used on tapes. This email should contain the type of tape (3592Jx/LTO#) and the number series of the labels.

- 7.7. Off-Site Library – The backup media, software, and documentation for NCDC is stored at the off-site library. The operators are responsible for taking, storing, and retrieving these items. Temperature and humidity readings are recorded each day it is visited.

7.7.1. Filing and Retrieving Items - All items stored in the off-site library must be properly documented. The emails requesting the daily backup tapes for HPSS and TSM to be taken off-site are saved in the email folders at the console. Items are recorded in NSDSS Inventory (located in Daily Forms and Checklists in STG-Console's Google Docs). Visits to the off-site library are generally made between 11:00A.M.-Noon every normal business day. Any "customer-requested" data that is asked for after 11:00AM will be retrieved during the next scheduled visit. Any media requested by an ITB System Administrator to restore a critical server will be retrieved immediately, regardless of the time or day requested. If any requested tape from the off-site can not be found, first check the HPSS Health and Status Monitor or the OU812 Web Interface to see if the tape is actually in the robot. If the tape still cannot be found, email Ryan Nelson or Robert Brixcoe with the number of the tape in question. The keys to the off-site library, car, and software cabinet are in the key lockbox. The car/van will need to be signed out at the guard station. If the van is used during normal business hours, it will need to be reserved in Google Calendar, the keys retrieved from Charity Vess (Room 557 DO) and signed out in the notebook at her desk. The gas card can be retrieved from the DO admin, as well.

7.7.2. Directions - Head west on Patton to I-240W, continue to I-26E, take exit 37 (Long Shoals Road, NC-146), turn right, cross Brevard Road (hwy 191) into Vista Industrial Park, turn right at Trident Drive, Union Transfer is the second driveway on the left (12.5 miles).

Alternate Route: Head west on Patton to I-240W, continue to I-26E, take exit 33 (Brevard Road, hwy 191), turn right into Vista Industrial Park, turn right at Trident Drive, Union Transfer is the second driveway on the left.

7.7.3. Contact - The normal business hours work number for Union Transfer is 209-0171. The "after hours" contact numbers are kept in the white phone book at the console. Their address is: Union Transfer & Storage, 6 Trident Drive, Arden, 28704.

7.7.4. Requests from the 14th WS - The 14th Weather Squadron has been given space to store a cabinet which contains their own back-up tapes. The cabinet is unlabeled, mostly without handles, and is located on the far right hand wall when entering the room.

On infrequent occasions they will request to accompany an operator the off-site so that they can inspect, remove, or place tapes in the cabinet. They are to follow in their own vehicle and handle their own equipment.